



International Civil Aviation Organization

MIDANPIRG Communication, Navigation and Surveillance Sub-Group

**Eleventh Meeting (CNS SG/11)
(Muscat, Oman, 16-19 May 2022)**

Agenda Item 4: CNS planning and implementation in the MID Region

ANS CYBER SECURITY

GUIDELINES ON THE IMPLEMENTATION OF CYBERSECURITY ON ANS IN THE ICAO MID REGION

(Presented by Egypt)

SUMMARY

The aim of this working paper is to propose establishing a new document called guidelines on the implementation of Cybersecurity on ANS in the ICAO MID Region, as an implementation to ICAO cybersecurity strategy and ICAO cybersecurity action plan in ICAO MID Region.

Action by the meeting is at paragraph 3.

REFERENCES

- Aviation Cybersecurity Strategy
- 2nd Version of ICAO Cybersecurity Action Plan (CyAP)
- MIDANPIRG/17 Report
- MIDANPIRG/19 Report

1. INTRODUCTION

1.1 The importance of cybersecurity and cyber resilience in the aviation dramatically increased with time, and this urgency of cybersecurity has been highlighted time and again due to subsequent attacks before and during the COVID-19 pandemic. Furthermore, in addition to the catastrophic impact of COVID-19 on the global economy in general, and on aviation in particular, the pandemic has showed increased levels of cyber-attacks. Recognizing the multi-faceted and multi-disciplinary nature of cybersecurity, and noting that cyber-attacks can simultaneously affect a wide range of areas and spread rapidly, it is imperative to develop a common vision and define a global Cybersecurity Strategy. Therefore, ICAO developed and published Aviation Cybersecurity Strategy to enable a sustainable and strong cybersecurity framework.

2. DISCUSSION

2.1 The ICAO Cybersecurity Strategy comprises seven pillars, including:

- Pillar 1: International cooperation
- Pillar 2: Governance
- Pillar 3: Effective legislation and regulations
- Pillar 4: Cybersecurity policy
- Pillar 5: Information sharing
- Pillar 6: Incident management and emergency planning
- Pillar 7: Capacity building, training and cybersecurity culture

2.2 The ICAO Cybersecurity Action Plan comprises principles, measures, and proposed actions to achieve the objectives of the Cybersecurity Strategy's seven pillars. It provides a framework for cooperation between all concerned stakeholders to develop the ability to identify, prevent, detect, respond to, and recover from cyber-attacks on civil aviation.

2.3 Due to the dynamic nature of cybersecurity and continuous evaluation, the 2nd version of ICAO Cybersecurity Action Plan (CyAP) was developed early 2022.

2.4 The meeting may wish to recall that MIDANPIRG/19 encouraged States to ensure alignment of ANS national Cyber Security plan with 2nd version of ICAO CyAP.

2.5 Actions taken in MID Region to address the cyber security in ANS in compliance with ICAO cyber security strategy:

- The MIDANPIRG/17 meeting, through the Decision 17/38, established ANS Cyber Security Working Group (previously named ATM Data Security Action Group MIDANPIRG/16, through Decision 16/26) to cover the issue of cyber security in ICAO MID Region.
- The Minimum Security Baselines (MSBs) have been endorsed as the baseline security guidelines for the MID Region which supports the implementation of **Pillar No. 3** in ICAO cyber security strategy "Effective legislation and regulations".
- For the implementation of **Pillar No. 4** of ICAO cyber security strategy "Cybersecurity policy", ICAO developed a guidance material for policy statement.
- ATM data cyber security (ADCS) portal has been established to be used as a prototype platform for information sharing of ANS cyber security. Furthermore, States assigned ADCS focal point(s) to register on the ADCS Portal such that states can share their experience related to cyber security, through the ADCS Portal. The ADCS portal supports the implementation of **Pillar No. 5** of ICAO cybersecurity strategy "information sharing".
- Table top exercise will be executed in cooperation with ICAO MID this year, in addition to other activities, which supports the implementation of **Pillar No. 7** in ICAO cyber security strategy, "Capacity building, training and cybersecurity culture". Furthermore, ICAO developed a guidance material for cyber security culture.

2.6 For gap analysis between what are required in the ICAO cyber security strategy and cyber security action plan on one hand, and the current implementation level in our MID Region on the other hand, the analysis indicates that there is no coverage of **Pillar 1** "International Cooperation", to achieve regulatory harmonization at global, **Regional** and national level in order to promote global coherence and ensure interoperability of protection measures. Furthermore, there is coverage of **Pillar No. 2** "Governance"

and **Pillar No. 6** “Incident management and emergency planning”. Additionally, even the Minimum Security Baselines (MSBs) were established. However, there is no comprehensive addressing to ICAO standards and recommended practices represented by ANNEX 17 and ATM data security document “ICAO Doc. 9985”. Therefore, a proposal to establish a new document entitled “**Guidelines on the Implementation of Cybersecurity on ANS in the ICAO MID Region**” be prepared to comprehensively cover all the seven pillars of ICAO cybersecurity strategy.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information mentioned in this Working Paper; and
- b) invite the meeting to agree that ICAO MID ANS cybersecurity working group to develop guidelines on the implementation of cyber security in ANS inline with ICAO Cyber security strategy such that be reviewed during the next CNS SG meeting then to MIDANPIRG/20 for endorsement.

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